



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,259	01/02/2002	Anna Charny	CISCP731	7467
26541	7590	06/26/2006	EXAMINER	
Cindy S. Kaplan P.O. BOX 2448 SARATOGA, CA 95070			SERRAO, RANODHI N	
			ART UNIT	PAPER NUMBER
			2141	

DATE MAILED: 06/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action
Before the Filing of an Appeal Brief**

Application No.

10/038,259

Applicant(s)

CHARNY ET AL.

Examiner

Ranodhi Serrao

Art Unit

2141

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 26 May 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ They raise the issue of new matter (see NOTE below);
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

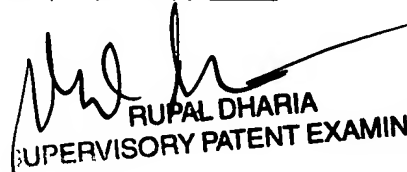
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: _____.
Claim(s) objected to: _____.
Claim(s) rejected: 1,3-12,14-16,18-25 and 27-32.
Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See attached Response to Arguments.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____.
13. ☐ Other: _____.


RUPAL DHARIA
SUPERVISORY PATENT EXAMINER

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 26 May 2006 have been fully considered but they are not persuasive.
2. The applicant argued that the partial paths disclosed in Kodialam et al. are part of the backup and are not a link pair traversing a node to be protected (active path). The examiner points out that a link pair may be any pair of links active or backup. There is no mention of "active path" neither in the claims nor in the specification. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., active path) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).
3. In either case Kodialam et al. teaches protecting "active path" throughout the reference. For instance in ¶ 29, Kodialam et al. states, "For a node failure, all the links on this node fail and dynamic backup routing desirably designs the backup path to protect against the node's link failures by determining a backup path for every incident link of the node and the last link in the **active path** to the destination node." Emphasis added. Therefore it is clear that Kodialam et al. teaches the invention as claimed.
4. The examiner points out that the pending claims must be "given the broadest reasonable interpretation consistent with the specification" [*In re Prater*, 162 USPQ 541 (CCPA 1969)] and "consistent with the interpretation that those skilled in the art would

Art Unit: 2141

reach" [In re Cortright, 49 USPQ2d 1464 (Fed. Cir. 1999)]. In conclusion, upon taking the broadest reasonable interpretation of the claims, the cited references teach all of the claimed limitations. And the rejections are maintained. See below.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1, 3-12, 14-16, 18-25, and 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinoshita et al. (2002/0172149) and Kodialam et al. (2002/0067693).

7. As per claims 1, 12, 16, and 25, Kinoshita et al. teaches in a data communication network, a method for protecting a node (paragraph 0002), said method comprising processes of: providing a backup bandwidth pool on links of said data communication network (paragraph 0073); identifying a link pair traversing said node, said link pair having a bandwidth to be protected (paragraph 0067); establishing as a backup for said link pair a set of one or more paths that do not include said node (paragraph 0073) and wherein said one or more paths collectively have backup bandwidth greater than or equal to said bandwidth to be protected (paragraph 0012); deducting, for each link included in said set of paths, from backup bandwidth available for protecting said node, while not deducting from backup bandwidth available for protecting other nodes in said data communication network (paragraph 0116); and repeating said processes of identifying, establishing, and deducting for a plurality of link pairs traversing said node

Art Unit: 2141

without exceeding available backup bandwidth of links used in establishing said backups (paragraph 0126). But fails to teach wherein said bandwidth to be protected of said link pair comprises a lesser of primary bandwidths of links of said link pair.

However, Kodialam et al. teaches wherein said bandwidth to be protected of said link pair comprises a lesser of primary bandwidths of links of said link pair (see Kodialam et al, paragraph 33). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Kinoshita et al. to wherein said bandwidth to be protected of said link pair comprises a lesser of primary bandwidths of links of said link pair in order to employ a local restoration model to determine the allocation of, and, in operation, to switch between, a primary (also termed active) path and a secondary (also termed backup) path based upon detection of a network failure (see Kodialam et al., paragraph 0014).

8. As per claims 4, 19, and 28, Kinoshita et al. teaches a method wherein said set of one or more paths comprises one or more label switched paths (paragraph 0156).

9. As per claim 5, Kinoshita et al. teaches a method wherein said processes of identifying and establishing occur under control of said node (paragraph 0024).

10. As per claims 7, 20, and 29, Kinoshita et al. teaches a method further comprising: signaling said backups to other nodes adjacent to said node in said data communication network (paragraph 0068).

11. As per claims 3, 14, 18, and 27, Kinoshita et al. and Kodialam et al. teach the mentioned limitations of claims 1, 12, 16, and 25 above but Kinoshita et al. fails to teach

Art Unit: 2141

a method wherein said bandwidth to be protected of said link pair comprises a total bandwidth of LSPs employing said link pair. However, Kodialam et al. teaches a method wherein said bandwidth to be protected of said link pair comprises a total bandwidth of LSPs employing said link pair (see Kodialam et al., paragraph 0032). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Kinoshita et al. to a method wherein said bandwidth to be protected of said link pair comprises a total bandwidth of LSPs employing said link pair in order to guarantee minimum bandwidth for the path of a packet flow through the network (see Kodialam et al., paragraph 0008).

12. As per claim 6, Kinoshita et al. and Kodialam et al. teach the mentioned limitations of claim 1 above but Kinoshita et al. fails to teach a method wherein said processes of identifying and establishing occur under control of a computer independent of said node. However, Kodialam et al. teaches a method wherein said processes of identifying and establishing occur under control of a computer independent of said node (see Kodialam et al., paragraph 0073). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Kinoshita et al. to a method wherein said processes of identifying and establishing occur under control of a computer independent of said node in order to route data through a network having a plurality of nodes interconnected by a plurality of links represented by a graph (see Kodialam et al., paragraph 0015).

13. As per claims 8, 15, 21, and 30, Kinoshita et al. teaches a method for operating a data communication network to provide protection to nodes in said data communication

Art Unit: 2141

network, said method comprising: maintaining, for each of a plurality of links in said data communication network, a primary bandwidth pool and a backup bandwidth pool (see Kinoshita et al., paragraph 0073); and establishing backup nodes to protect a plurality of nodes of said network (see Kinoshita et al., paragraph 0156), each of said backup nodes consuming backup bandwidth from backup bandwidth pools of selected ones of said plurality of links (see Kinoshita et al., paragraph 0012); and wherein all backup protecting any particular node of said network do not consume more bandwidth on any link than provided by the link's backup bandwidth pool (see Kinoshita et al., paragraph 0116). But fails to teach backup tunnels and wherein there is at least one set of backup tunnels that protect disparate nodes and that consume more bandwidth on at least one link than provided by said at least one link's backup bandwidth pool. However, Kodialam et al. teaches backup tunnels (see Kodialam et al., paragraph 0024) and wherein there is at least one set of backup tunnels that protect disparate nodes (see Kodialam et al., paragraph 0030) and that consume more bandwidth on at least one link than provided by said at least one link's backup bandwidth pool (see Kodialam et al., paragraph 0060). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Kinoshita et al. to backup tunnels and wherein there is at least one set of backup tunnels that protect disparate nodes and that consume more bandwidth on at least one link than provided by said at least one link's backup bandwidth pool in order to allow all nodes in the network to have partial network information available to its routing algorithm (see Kodialam et al., paragraph 0032).

Art Unit: 2141

14. As per claims 9, 10, 22, 23, 31, and 32, the above-mentioned motivation of claim 8 applies fully in order to combine Kinoshita et al. and Kodialam et al.

15. As per claims 9, 22, and 31, Kinoshita et al. and Kodialam et al. teach a method wherein at least one of said backup tunnels comprises a label switched path (see Kinoshita et al., paragraph 0156).

16. As per claims 10, 23, and 32, Kinoshita et al. and Kodialam et al. teach a method wherein establishing backup tunnels comprises: signaling said backup tunnels to adjacent nodes of each protected node (see Kinoshita et al., paragraphs 0068 and 0156).


17. As per claims 11 and 24, Kinoshita et al. teaches the mentioned limitations of claims 8 and 21 above but fails to teach a method wherein establishing backup tunnels comprises: performing backup tunnel selection computations at each protected node for that protected node. However, Kodialam et al. teaches a method wherein establishing backup tunnels comprises: performing backup tunnel selection computations at each protected node for that protected node (see Kodialam et al. paragraph 0028). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Kinoshita et al. to a method wherein establishing backup tunnels comprises: performing backup tunnel selection computations at each protected node for that protected node in order to reserve link bandwidth and establish an NTP (see Kodialam et al., paragraph 0008).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ranodhi Serrao whose telephone number is (571)272-7967. The examiner can normally be reached on 8:00-4:30pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (571)272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


RUPAL DHARIA
SUPERVISORY PATENT EXAMINER